C

10. A process according to claim 6, wherein the protein fraction isolated from Fraction I is the protein therein with mEGF activity and a molecular weight of about 4770, in substantially pure form, with mEGF activity per milligram equivalent to at least 943,000 nanograms of mEGF.

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? s free(w5)(natural?(w)occur?)
          222602  FREE
           30950  NATURAL?
           99714  OCCUR?
      S4      11  FREE(W5)(NATURAL?(W)OCCUR?)
? s free(w5)(natural?(w)present)
          222602  FREE
           30950  NATURAL?
          191827  PRESENT
      S5       1  FREE(W5)(NATURAL?(W)PRESENT)
? s s2 and s4
          11285  S2
             11  S4
      S6       3  S2 AND S4
? s s2 and s5
          11285  S2
              1  S5
      S7       0  S2 AND S5
? t s6/25/1-3

 6/25/1     (Item 1 from file: 340)
2339845
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United States Patent

Patent Number: US 5192538
Date of Patent: 930309

STABLE FORMS OF ANTIGENIC TAENIA OVIS POLYPEPTIDES

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Assignee: Her Majesty The Queen in right of New Zealand through the Ministry of Agriculture & Fisheries, Wellington, NZ; Pitman-Moore New Zealand Limited, Upper Hutt, NZ; The University of Melbourne, Melbourne, AU

Appl. No.: US 818453
Filed: 920103

Related U.S. Application Data

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Cont-in-part of(Pat#,Ser#,Date): US 349723 890509
Priority Applic(Ser#,Date): NZ 224597 880512
NZ 224862 880601

Int. Cl. A61K-039/002;
U.S. Cl. 424088000; 435069700; 514008000; 514012000
Field of Search 424088000; 435069300; 435069700; 435071200; 514002000; 514012000; 530324000; 530350000

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Primary Examiner - Moskowitz, Margaret
Assistant Examiner - Cunningham, T
Attorney, Agent or Firm - Nixon & Vanderhye

ABSTRACT

This invention relates to stable forms of peptide antigens of T. ovis suitable for use in vaccines to protect ruminants against infection by cestode parasites. The antigens are preferably obtained by expression of DNA coding therefor in a recombinant host cell. Aspects of the invention include DNA encoding the antigens, vectors containing the DNA and hosts which express the antigens.
005 Claims, 4 Drawing Figures, 4 Drawing Sheets

EXEMPLARY CLAIM

1. A stable antigenic peptide essentially free from naturally occurring admixtures, comprising a fragment of a T.ovis oncosphere antigen which runs as a 47-52 kD doublet on SDS-PAGE, which fragment: (a) has a molecular weight of from about 23 kD to about 24 kD; and (b) generates a protective immunological response to T.ovis infection in a ruminant; or a stable subfragment of said 23-24 kD fragment which generates a protective immunological response T.ovis infection.

NON-EXEMPLARY CLAIMS

2. A stable antigenic peptide according to claim 1, produced by: culturing a host cell transformed with a recombinant expression vector containing a DNA molecule encoding a stable antigenic peptide as defined in claim 1, said host cell being capable of expressing said stable antigenic peptide which is encoded; and recovering the expressed stable antigenic peptide.
3. A peptide as claimed in claim 1 comprising the amino acid sequence

D R A W I N G

4. A peptide as claimed in claim 2 which is expressed in the host cell as a fusion protein.
5. A peptide as claimed in claim 4 which is expressed as a fusion protein with the enzyme glutathione s-transferase.

6/25/2 (Item 2 from file: 340)
2334015

United States Patent

Patent Number: US 5187262
Date of Patent: 930216

CDNA ENCODING A POLYPEPTIDE INCLUDING A HEVEIN SEQUENCE; PURE PROTEIN FROM CLONES DNA SIIMILAR TO THAT FOUND IN THE LATEX OF THE RUBBER TREE; BINDING OF CHITIN; FUNGICIDES

Inventor(s): Broekaert, Willem F, Dilbeek, NY, BEX, (US); Chua, Nam-Hai, Scarsdale, NY, (US); Kush, Anil, New York, NY, (US); Raikhel, Natasha V, Okemos, MI, (US)
Assignee: Board of Trustees, operating Michigan State University, East Lansing, MI
Appl. No.: US 587071
Filed: 900924

Related U.S. Application Data

Priority Applic(Ser#,Date): US 587071 900924

Int. Cl. C07K-015/10;
U.S. Cl. 530370000; 435069100; 530379000
Field of Search 435069100; 514008000; 514012000; 530370000; 530379000

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Assistant Examiner - Furman, Keith C
Attorney, Agent or Firm - McLeod, Ian C

ABSTRACT

A cDNA clone (HEV1) encoding hevein was isolated via polymerase chain reaction (PCR) using mixed oligonucleotides corresponding to two regions of hevein as primers and a Hevea brasiliensis latex cDNA library as a template. HEV1 is 1018 nucleotides long and includes an open reading frame of 204 amino acids. The deduced amino acid sequence contains a putative signal sequence of 17 amino acid residues followed by a 187 amino acid polypeptide. The amino-terminal region (43 amino acids) is identical to hevein and shows homology to several chitin-binding proteins and to the amino-termini of wound-induced genes in potato and poplar. The carboxyl-terminal portion of the polypeptide (144 amino acids) is 74-79% homologous to the carboxyl-terminal region of wound-inducible genes of potato. Wounding, as well as application of the plant hormones abscisic acid and ethylene, resulted in accumulation of hevein transcripts in leaves, stems and latex, but not in roots, as shown by using the cDNA as a probe. A fusion protein was produced in E. coli from the protein of the present invention and maltose binding protein produced by the E. coli.
002 Claims, 12 Drawing Figures, 6 Drawing Sheets

This application was funded under Department of Energy Contract

DE-AC02-76ER01338. The U.S. Government has certain rights under application and any patent issuing thereon.

EXEMPLARY CLAIM

D R A W I N G

1. A protein free of other proteins naturally occurring with protein, said protein selected from the group consisting of the seque of 204 amino acids shown in FIG. 2 and subfragments of said seque larger than the 43 amino acid hevein sequence which includes the hev sequence and which binds chitin.

NON-EXEMPLARY CLAIMS

2. A method for inhibiting growth by binding chitin in a fungus whi comprises exposing the chitin of the fungus to an amount of a prote free of other proteins naturally occurring with the protein, sa protein selected from the group consisting of the sequence of 204 ami acids shown in FIG. 2 and subfragments of said sequence larger than th 43 amino acid hevein sequence which includes the hevein sequence, whic protein binds the chitin and inhibits fungal growth.

6/25/3 (Item 3 from file: 340)
2284083

United States Patent

Patent Number: US 5141922
Date of Patent: 920825

BIOLOGICALLY ACTIVE PROTEINS AND A METHOD FOR THEIR USE; ENHANCING LACTATION OF COWS BY ADMINISTERING BOVINE GROWTH HORMONE WITH VALINE REPLACING LEUCINE AT AMINO ACID 126

Inventor(s): Krivi, Gwen G, Olivette, MO, (US)
Assignee: Monsanto Company, St Louis, MO
Notice: Portion of the term of this patent, subsequent to 20080806 has been disclaimed
Appl. No.: US 729283
Filed: 910712

Related U.S. Application Data

Continuation of(Pat#,Ser#,Date):	US 5037806		US 824202	860204
Cont-in-part of(Pat#,Ser#,Date):	US 4861868		US 704362	850222
Priority Applic(Ser#,Date):	US 729283	910712		
	US 824202	860204		
	US 704362	850222		

Int. Cl. A61K-037/36;
U.S. Cl. 514012000; 514021000; 530324000; 530399000
Field of Search 514002000; 514012000; 514021000; 530324000; 530399000

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Primary Examiner - Moezie, F T
Attorney, Agent or Firm - Beck, George R; Eberhardt, Wayne R

ABSTRACT

A method for preparing polypeptides in bacteria with an alanine rather than a methionine at the N-terminus. The DNA sequence expressed has an alanine codon immediately following from at least one methionine codon, and allows for the expression of polypeptides having the amino acid sequence essentially the same as such naturally occurring eucaryotic protein as various bovine and porcine somatotropin species. In another important embodiment, the invention provides a class of compositions comprising certain valine-containing somatropin species which increase milk production in lactating mammals to a significantly greater extent than otherwise-identical leucine somatotropin species.
013 Claims, 10 Drawing Figures, 10 Drawing Sheets

EXEMPLARY CLAIM

1. A method for enhancing lactation of a cow comprising administering to said cow a lactation enhancing amount of a composition comprising bovine growth hormone (bGH) including bGH(V) having a valine at the position of leucine/valine heterogeneity corresponding to amino acid 126 in pituitary bGH wherein the concentration of said bGH(V) based on the total weight of bGH in said composition is greater than about 30 percent.

NON-EXEMPLARY CLAIMS

2. A method of claim 1 wherein the concentration of said bGH(V) is greater than 50%.
3. A method of claim 1 wherein said bGH(V) has an alanine at the amino terminus thereof.
4. A method of claim 1 wherein said bGH(V) has a methionine at the amino terminus thereof.

5. A method of claim 3 wherein said bGH(V) has an amino acid sequence essentially the same as naturally occurring pituitary bGH.
6. A method of claim 4 wherein said bGH(V) has an amino acid sequence essentially the same as naturally occurring pituitary bGH.
7. A method of claim 1 wherein said composition is essentially free from naturally occurring protein of bovine origin.
8. A method for enhancing lactation of a cow comprising administering to said cow a lactation enhancing amount of essentially pure bGH(V) having a valine at the position of leucine/valine heterogeneity corresponding to amino acid 126 in pituitary bGH.
9. A method of claim 8 wherein said bGH(V) has an alanine at the amino terminus thereof.
10. A method of claim 8 wherein said bGH(V) has a methionine at the amino terminus thereof.
11. A method of claim 9 where said bGH(V) has an amino acid sequence essentially the same as a naturally occurring pituitary bGH.
12. A method of claim 10 wherein said bGH(V) has an amino acid sequence essentially the same as a naturally occurring pituitary bGH.
13. A method of claim 8 wherein said bGH(V) is produced by recombinant DNA techniques and is essentially free from naturally occurring proteins of bovine origin.

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